REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

I. Amendments to the Specification and Abstract

The specification and abstract have been reviewed and revised to improve their English grammar. No new matter has been added.

II. Title of the Invention

In accordance with Examiner's request, the title of the invention has been amended. The invention is now titled "A CONFOCAL OPTICAL SYSTEM APERTURE DETECTOR THAT MEASURES A LIGHT QUANTITY BALANCE OF LIGHT RECEIVED TO DETECT A POSITION DISPLACEMENT, AND A CONFOCAL OPTICAL SYSTEM APERTURE POSITION CONTROLLER, AN OPTICAL HEAD AND A POSITION DETECTING METHOD PERFORMING THE SAME."

Applicants submit that the amended title is clearly indicative of the claimed invention, and, as a result withdrawal of the Examiner's objection is respectfully requested.

III. Amendments to the Claims

Claims 1-19 remain cancelled without prejudice or disclaimer of the subject matter contained therein.

Independent claims 20, 25, 28, 29, 34, 35, 37 and 38 have been amended to clarify features of the invention recited therein and to further distinguish the present invention from the references relied upon in the rejections discussed below.

It is also noted that claims 20-38 have been amended to make a number of editorial revisions thereto. These editorial revisions have been made to place the claims in better U.S. form. Further, these editorial revisions have not been made to narrow the scope of protection of the claims, or to address issues related to patentability, and therefore, these amendments should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

IV. 35 U.S.C. § 102 Rejection

Claims 20-25 and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Takahashi (U.S. 5,748,601). This rejection is believed clearly inapplicable to amended independent claims 20, 25, 28, 29, 34, 35, 37 and 38 and the claims that depend therefrom for the following reasons.

Independent claim 20 recites a confocal optical system aperture position detector including a light source, a first focusing means, a second focusing means for focusing, at a focusing point position, light having passed through a sample or light reflected from the sample, an aperture provided at the focusing point position, and a detector that receives light having passed by the aperture, the detector including (and receiving the light at) a plurality of light reception regions. Further, claim 20 recites that the detector measures a light quantity balance of

the light received at the plurality of light reception regions to detect a position displacement between the light focused at the focusing point position by the second focusing means and the aperture. Takahashi fails to disclose or suggest the above-mentioned distinguishing features as recited in independent claim 20.

Rather, Takahashi teaches that light receiving sections of a photo detector 16 receive, through a pin hole 15, positive and negative first-order diffracted beams generated by a diffraction grating 12 and zero-order diffracted beams from an optical disk 20 (see Fig. 2 and col. 4, lines 37-44). In addition, Takahashi teaches that a tracing error detecting section 17 generates a tracking error signal G1 based on the positive and negative first-order diffracted beams detected by the photo detector 16, and teaches that a focusing error detecting section 18 generates a focusing error signal G2 based on the zero-order diffracted beam that is divided into four segments by the photo detector 16 (see col. 4, lines 3-15 and lines 26-35).

Thus, in view of the above, it is clear that Takahashi teaches that the photo detector 16 detects positive and negative first-order diffracted beams and zero-order diffracted beams in order to generate a tracking error signal and a focusing error signal, but fails to disclose or suggest the detector measures a light quantity balance of the light received at the plurality of light reception regions to detect a position displacement between the light focused at the focusing point position by the second focusing means and the aperture, as recited in claim 20.

In other words, according to the structure disclosed by Takahashi, when light focused by an objective lense 14 and an aperture of the pin hole 15 is displaced, the photo detector 16 is not able to accurately detect the positive and negative first-order diffracted beams and the zero-order

diffracted beams because the position displacement between the light focused by the objective lens 14 and the apertures of the pin hole member 15 is not taken into consideration. Whereas, according to claim 20, the detector measures a light quantity balance of the light received at the plurality of light reception regions to detect a position displacement between the light focused at the focusing point position by the second focusing means and the aperture.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 20 and claims 21-24 that depend therefrom are not anticipated by Takahashi.

Amended independent claims 25, 28, 29, 34, 35, 37 and 38 are directed to a confocal optical system aperture position controller, a confocal optical system aperture position controller, an optical head, an optical head, a method and a method, respectively and each recite features that correspond to the above-mentioned distinguishing features of independent claim 20. Thus, for the same reasons discussed above, it is respectfully submitted that independent claims 25, 28, 29, 34, 35, 37 and 38 and claims 26, 27, 30-33 and 36 that depend therefrom are allowable over Takahashi.

V. 35 U.S.C. § 103(a) Rejection

Claims 26 and 28-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Takahashi and Ando et al. (U.S. 6,392,977). This rejection is inapplicable to claims 26 and 28-38 for the following reasons.

As discussed above, Takahashi does not disclose or suggest the invention recited in independent claim 25. Claim 26 depends on claim 25. Thus, at least, due to the dependence on

claim 25, claim 26 is not obvious in view of the combination of Takahashi and Ando.

Regarding the 35 U.S.C. § 103(a) rejection of claims 28-38, Applicants note that as mentioned above, Takahashi fails to disclose or suggest the above-mentioned distinguishing features recited in claims 28-38. Furthermore, Applicants note that Ando has not been relied upon for teaching the features of claims 28-38 that are lacking from Takahashi, and also note that Ando does in fact fail to disclose or suggest the above-mentioned distinguishing features recited in claims 28-38.

Therefore, no obvious combination of Takahashi with Ando would result in, or otherwise render obvious, the invention recited in independent claims 28, 29, 34, 35, 37 and 38 and the claims that depend therefrom.

Furthermore, for the reasons discussed above there is no disclosure or suggestion in Takahashi and/or Ando or elsewhere in the prior art of record which would have caused a person of ordinary skill in the art to modify Takahashi and/or Ando to obtain the invention of independent claims 20, 25, 28, 29, 34, 35, 37 and 38. Accordingly, it is respectfully submitted that independent claims 20, 25, 28, 29, 34, 35, 37 and 38 and claims 21-24, 26, 27, 30-33 and 36 that depend therefrom are clearly allowable over the prior art of record.

VI. Conclusion

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance and an early notification thereof is earnestly requested. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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